

# Postgraduate Certificate Endurance Training from Theory to Practice

Endorsed by the NBA



**tech** global  
university



## Postgraduate Certificate Endurance Training from Theory to Practice

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/postgraduate-certificate/endurance-training-theory-practice](http://www.techtute.com/us/postgraduate-certificate/endurance-training-theory-practice)

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# 01 Introduction

With this specialization the student will learn various tools to assess and monitor the physical performance of the athlete, and to plan or schedule training aimed at the development of aerobic endurance, with guarantees of success.

In this module the student will not only find all the theoretical support based on the most current scientific evidence, but will also obtain a clear practical descent to the real training field, which makes it a module of vital importance in their academic education.



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*The most up-to-date academic specialization taught by extraordinary teachers experienced in the world of sports and academia”.*

In this Postgraduate Certificate you will find detailed training on key aspects of sports performance, treated with a unique didactic and depth in the current academic offer. Each subject will be taught by true specialists in the field, which guarantees the highest level of knowledge in the subject.

This Postgraduate Certificate in Endurance Training from Theory to Practice will provide the student with theoretical contents of the highest quality and depth. One of the characteristics that differentiate this course from others is the relationship between the different topics of the program at a theoretical level but, above all, at a practical level, making the student obtain real examples of teams and athletes of the highest sports performance worldwide, as well as from the professional world of sports, resulting in the student being able to build knowledge in the most complete way.

Another strong point of this Postgraduate Certificate in Endurance Training from Theory to Practice is the training of the student in the use of new technologies applied to Sports Performance. The student will not only learn about new technology in the field of performance, but will learn how to use it and, more importantly, how to interpret the data provided by each device to make better decisions regarding training programming.

The teaching staff of this Postgraduate Certificate in Endurance Training from Theory to Practice has made a careful selection of each of the topics of this training in order to offer the student a study opportunity as complete as possible and always linked to current events.

Therefore, at TECH we have set out to create contents of the highest teaching and educational quality that will turn our students into successful professionals, following the highest quality standards in teaching at an international level. Therefore, we show you this Postgraduate Certificate with a rich content that will help you reach the elite of High Performance Sports. In addition, as it is an online course, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access the contents at any time of the day, balancing their work or personal life with their academic life.

This **Postgraduate Certificate in Endurance Training from Theory to Practice** contains the most complete and up-to-date scientific program on the market. The most important characteristics of the specialization are as follows

- ◆ The study of numerous case studies presented by specialists in high-performance sports training.
- ◆ The graphic, schematic and practical contents of the course are designed to provide all the essential information required for professional practice.
- ◆ Exercises where the self-assessment process can be carried out to improve learning.
- ◆ Algorithm-based interactive learning system for decision making.
- ◆ Special emphasis on innovative methodologies in personal training
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Immerse yourself in the study of this high level course and improve your skills in High Performance Sports".*

“

*This Postgraduate Certificate is the best investment you can make when selecting a refresher program, for two reasons: in addition to updating your knowledge as a personal trainer, you will obtain a certificate from one of the leading online universities in the world: TECH”*

The teaching staff includes professionals from the field of sports science, who bring their experience to this training program, as well as renowned specialists from leading societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

This program is designed around Problem-Based Learning, whereby the professional must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned, and experienced experts in High Performance in Sports with extensive experience.

*This course allows training in simulated environments, which provide immersive learning programmed to train for real situations.*

*This 100% online Postgraduate Certificate will allow you to balance your studies with your professional work while increasing your knowledge in this field.*



# 02 Objectives

The main objective of this program is the development of theoretical and practical learning, so that the sports science professional can master in a practical and rigorous way the new developments in High Performance in Sports.





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*Our goal is to achieve academic excellence and help you achieve professional success. Don't hesitate any longer and join us”*



## General Objectives

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- ◆ Master and apply with certainty the most current training methods to improve sports performance
- ◆ To effectively master statistics and thus be able to make a correct use of the data obtained from the athlete, as well as to initiate research processes
- ◆ Acquire knowledge based on the most current scientific evidence with full applicability in the practical field
- ◆ To master all the most advanced methods of sports performance evaluation
- ◆ Master the principles governing Exercise Physiology, as well as Biochemistry
- ◆ Master the principles governing Biomechanics applied directly to Sports Performance
- ◆ Master the principles governing Nutrition applied to sports performance
- ◆ Successfully integrate all the knowledge acquired in the different modules in real practice





## Specific Objectives

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- ◆ Study the different adaptations generated by aerobic endurance
- ◆ Apply the physical demands of situational sports
- ◆ Select the most appropriate tests to evaluate, monitor, tabulate and fractionate aerobic workloads
- ◆ Carry out the different methods to organize training sessions
- ◆ Design training sessions taking into account the sport



*The sports field requires prepared professionals and we give you the keys to position yourself among the professional elite"*

# 03 Course Management

Our teaching team, with a Postgraduate Certificate in High Performance in Sports, has a wide prestige in the profession and are professionals with years of teaching experience who have come together to help you give a boost to your profession. To this end, they have developed this Postgraduate Certificate with recent innovations in the subject that will allow you to train and improve your skills in this sector.





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*Learn from the best professionals and become a successful professional yourself”*

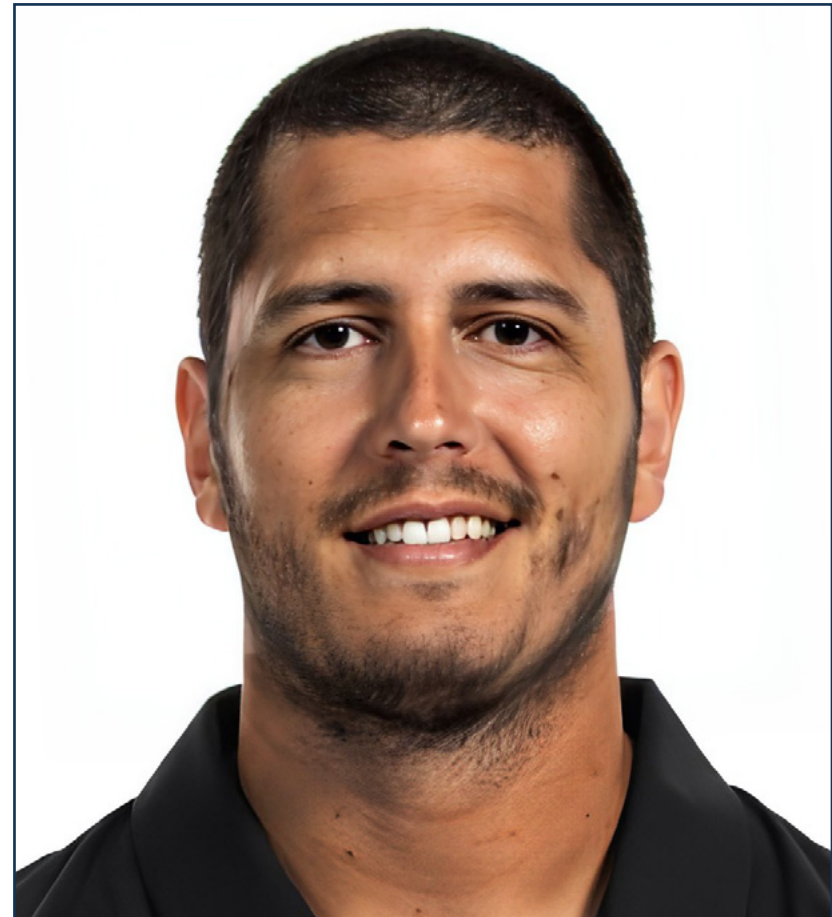
## International Guest Director

Tyler Friedrich, Ph.D., is a leading personality in the international field of Sports Performance and Applied Sports Science. With a strong academic background, he has demonstrated an exceptional commitment to excellence and innovation, and has contributed to the success of numerous elite athletes internationally.

Throughout his career, Tyler Friedrich has deployed his expertise in a wide range of sporting disciplines, from football to swimming, volleyball to field hockey. His work in performance data analysis, especially through the Catapult athlete GPS system, and his integration of sports technology into performance programs, has established him as a leader in athletic performance optimization.

As Director of Sports Performance and Applied Sports Science, Dr. Friedrich has led strength and conditioning training, as well as the implementation of specific programs for several Olympic sports, including volleyball, rowing and gymnastics. Here, he has been responsible for integrating equipment services, sports performance in soccer and sports performance in Olympic sports. In addition, incorporating DAPER sports nutrition within an athlete performance team.

Also certified by USA Weightlifting and the National Strength and Conditioning Association, he is recognized for his ability to combine theoretical and practical knowledge in the development of high performance athletes. In this way, Dr. Tyler Friedrich has left an indelible mark on the world of Sports Performance, being an outstanding leader and driver of innovation in his field.



## Dr. Friedrich, Tyler

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- Director of Sports Performance and Applied Sports Science at Stanford University
- Sports Performance Specialist
- Associate Director of Athletics and Applied Performance at Stanford University
- Director of Olympic Sport Performance at Stanford University
- Sports Performance Coach at Stanford University
- Ph.D. in Philosophy, Health and Human Performance from Concordia University Chicago
- Master of Science in Exercise Science from the University of Dayton
- Bachelor of Science, Exercise Physiology from the University of Dayton

“

*Thanks to TECH, you will be able to learn with the best professionals in the world”*

## Address



### Rubina, Dardo

- CEO of Test and Training
- EDM Physical Training Coordinator
- Physical trainer of the EDM First Team
- Master's Degree in ARD COE
- EXOS Certification
- Specialist in Strength Training for the Prevention of Injuries, Functional and Physical-Sports Rehabilitation
- Specialist in Strength Training Applied to Physical and Sports Performance
- Certification in Weight Management and Physical Performance Technologies
- Postgraduate course in Physical Activity in Populations with Pathologies
- Diploma in Advanced Studies (DEA) University of Castilla la Mancha
- PhD Candidate in ARD



## Professors

García, Gastón

- ◆ Degree in Physical Education
- ◆ Endurance Training Specialist
- ◆ Lecturer in many congresses and symposiums

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*Our teaching team will provide you with all their knowledge so that you are up to date with the latest information on the subject”*



04

# Structure and Content

The structure of the contents has been designed by a team of professionals who recognise the implications that training has on daily practice, who are aware of the relevance from current quality training in the field of High Performance in Sports ; and are committed to quality teaching using new educational technologies.





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*We have the most complete and up-to-date scientific program on the market. We want to provide you with the best specialization*

## Module 1. Endurance Training from Theory to Practice

- 1.1. General concepts
  - 1.1.1. General Definitions
    - 1.1.1.1. Education
    - 1.1.1.2. Trainability
    - 1.1.1.3. Sports Physical Preparation
  - 1.1.2. Objectives Endurance Training
  - 1.1.3. General Principles of Training
    - 1.1.3.1. Principles of Load
    - 1.1.3.2. Principles of Organization
    - 1.1.3.3. Principles of Specialization
- 1.2. Physiology of Aerobic Training
  - 1.2.1. Physiological Response to Aerobic Endurance Training
    - 1.2.1.2. Responses to Continuous Stress
    - 1.2.1.3. Responses to Intervallic Stress
    - 1.2.1.4. Responses to Intermittent Stress
    - 1.2.1.5. Responses to Stress in Small-Space Games
  - 1.2.2. Factors Related to Aerobic Endurance Performance
    - 1.2.2.1. Aerobic Power
    - 1.2.2.2. Anaerobic Threshold
    - 1.2.2.3. Maximum Aerobic Speed
    - 1.2.2.4. Economy of Effort
    - 1.2.2.5. Use of Substrates
    - 1.2.2.6. Characteristics of Muscle Fibers
  - 1.2.3. Physiological Adaptations to Aerobic Endurance
    - 1.2.3.1. Adaptations to Continuous Stress
    - 1.2.3.2. Adaptations to Intervallic Stress
    - 1.2.3.3. Adaptations to Intermittent Stress
    - 1.2.3.4. Adaptations to Stress in Small-Space Games



- 1.3. Situational Sports and Their Relation to Aerobic Endurance
  - 1.3.1. Group I Situational Sport Demands; Soccer, Rugby and Hockey
  - 1.3.2. Group II Situational Sport Demands; Basketball, Handball, Futsal
  - 1.3.3. Group III Situational Sport Demands; Tennis and Volleyball
- 1.4. Monitoring and Assessment of Aerobic Endurance
  - 1.4.1. Direct Treadmill Versus Field Evaluation
    - 1.4.1.1. VO<sub>2</sub>max Treadmill Versus Field
    - 1.4.1.2. VAM Treadmill Versus Field
    - 1.4.1.3. VAM versus VFA
    - 1.4.1.4. Time Limit (VAM)
  - 1.4.2. Continuous Indirect Tests
    - 1.4.2.1. Time Limit (VFA)
    - 1.4.2.2. 1,000m Test
    - 1.4.2.3. 5-Minute Test
  - 1.4.3. Incremental and Maximum Indirect Tests
    - 1.4.3.1. UMTT, UMTT-Brue, VAMEVAL and T-Bordeaux
    - 1.4.3.2. UNCa Test; Hexagon, Track, Hare
  - 1.4.4. Indirect Back-and-Forth and Intermittent Tests
    - 1.4.4.1. 20m Shuttle Run Test (Course Navette)
    - 1.4.4.2. YoYo Test
    - 1.4.4.3. Intermittent Tests; 30-15 IFT, Carminatti, 45-15. Test
  - 1.4.5. Specific Tests With Ball
    - 1.4.5.1. Hoff Test
  - 1.4.6. Proposal Based on the VFA
    - 1.4.6.1. VFA Contact Points for Football, Rugby and Hockey
    - 1.4.6.2. VFA Contact Points for Basketball, Futsal and Handball
- 1.5. Planning Aerobic Exercise
  - 1.5.1. Exercise Model
  - 1.5.2. Training Frequency
  - 1.5.3. Duration of the Exercise
  - 1.5.4. Training Intensity
  - 1.5.5. Density
- 1.6. Methods to Develop Aerobic Endurance
  - 1.6.1. Continuous Training
  - 1.6.2. Interval Training
  - 1.6.3. Intermittent Training
  - 1.6.4. SSG Training (Small-Space Games)
  - 1.6.5. Mixed Training (Circuits)
- 1.7. Program Design
  - 1.7.1. Preseason Period
  - 1.7.2. Competitive Period
  - 1.7.3. Postseason Period
- 1.8. Special Aspects Related to Training
  - 1.8.1. Concurrent Training
  - 1.8.2. Strategies to Design Concurrent Training
  - 1.8.3. Adaptations Generated by Concurrent Training
  - 1.8.4. Differences Between Genders
  - 1.8.5. De-Training
- 1.9. Aerobic Training in Children and Youth
  - 1.9.1. General concepts
    - 3.9.1.1 Growth, Development and Maturation
  - 1.9.2. Evaluation of VO<sub>2</sub>max and VAM
    - 1.9.2.1. Indirect Measurement
    - 1.9.2.2. Indirect Field Measurement
  - 1.9.3. Physiological Adaptations in Children and Youth
    - 1.9.3.1. VO<sub>2</sub>max and VAM Adaptations
  - 1.9.4. Design of Aerobic Training
    - 1.9.4.1. Intermittent Method
    - 1.9.4.2. Adherence and Motivation
    - 1.9.4.3. Games in Small Spaces

# 05 Study Methodology

TECH is the world's first university to combine the **case study** methodology with **Relearning**, a 100% online learning system based on guided repetition.

This disruptive pedagogical strategy has been conceived to offer professionals the opportunity to update their knowledge and develop their skills in an intensive and rigorous way. A learning model that places students at the center of the educational process giving them the leading role, adapting to their needs and leaving aside more conventional methodologies.



“

*TECH will prepare you to face new challenges in uncertain environments and achieve success in your career”*

## The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.

“

*At TECH you will NOT have live classes  
(which you might not be able to attend)”*





### The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.

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*TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want”*

## Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



## Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*



## A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



*The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule”*

### The effectiveness of the method is justified by four fundamental achievements:

1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
2. Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

## The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, obtaining a 4.9 out of 5.

*Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.*

*You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.*



As such, the best educational materials, thoroughly prepared, will be available in this program:



#### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



#### Practicing Skills and Abilities

You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### Interactive Summaries

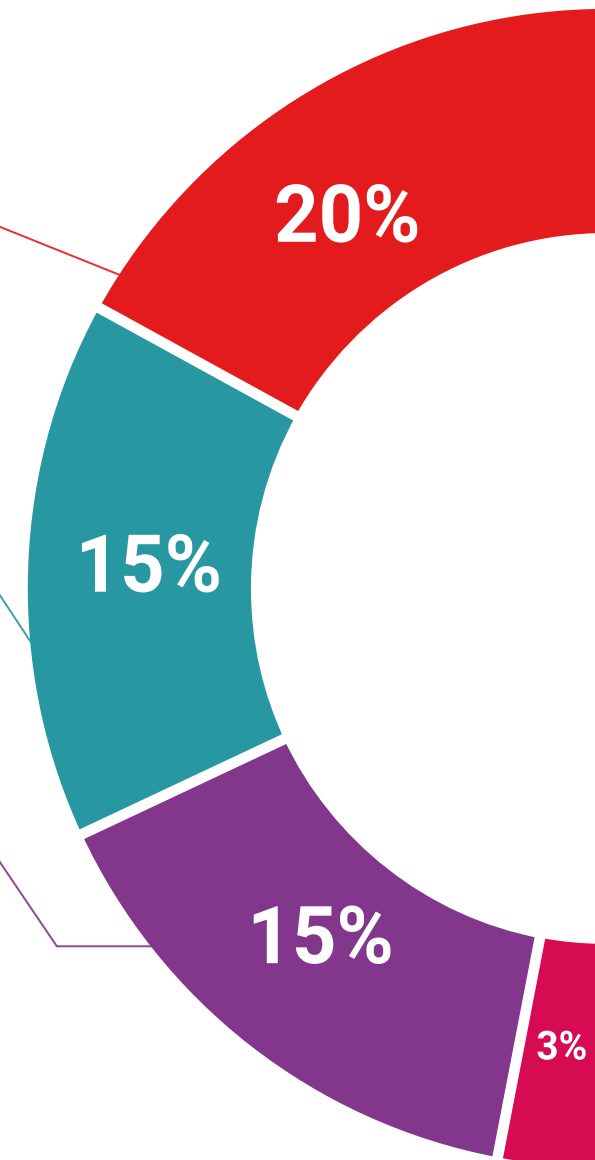
We present the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

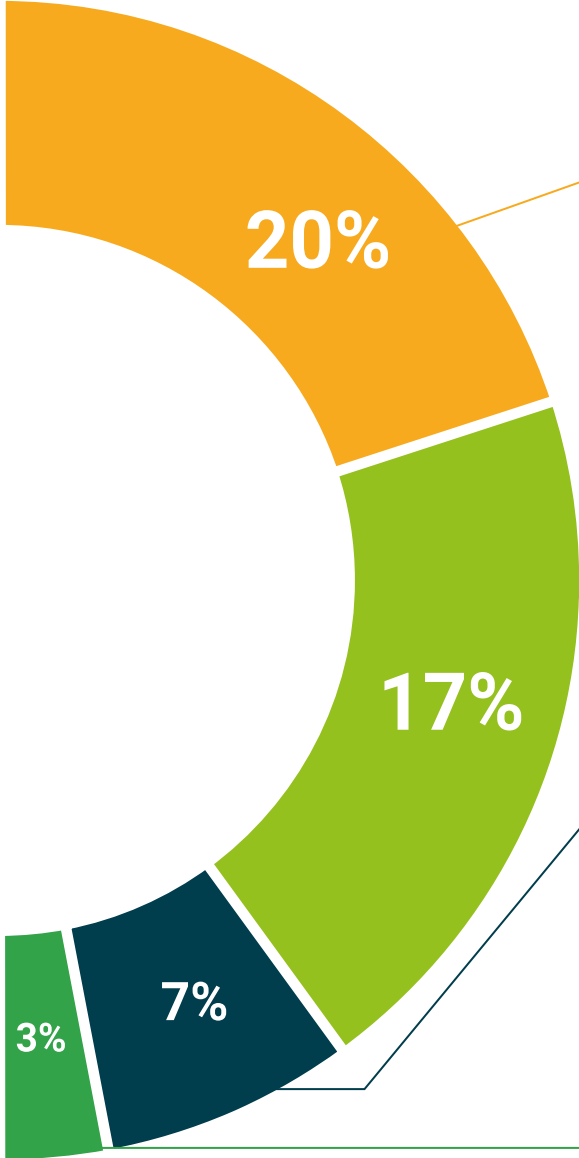
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.





**Case Studies**

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**Testing & Retesting**

We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.



**Classes**

There is scientific evidence suggesting that observing third-party experts can be useful.  
Learning from an expert strengthens knowledge and memory, and generates confidence for future difficult decisions.



**Quick Action Guides**

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.



# 06 Certificate

This Postgraduate Certificate in Endurance Training from Theory to Practice guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Postgraduate Certificate issued by TECH Global University.





The image features three black graduation caps (mortarboards) against a bright blue sky with light, wispy clouds. The caps are positioned at different angles, creating a sense of depth and movement. The bottom right corner of the image is a white diagonal shape that contains the text.

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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This private qualification will allow you to obtain a diploma for the **Postgraduate Certificate in Endurance Training from Theory to Practice** endorsed by TECH Global University, the world's largest online university.

**TECH Global University**, is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Certificate in Endurance Training from Theory to Practice**

Modality: **online**

Duration: **6 months**

Accreditation: **24 ECTS**

**Endorsed by the NBA**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development languages  
virtual classroom



## Postgraduate Certificate

Endurance Training from  
Theory to Practice

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Global University
- » Accreditation: 6 ECTS
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Certificate Endurance Training from Theory to Practice

Endorsed by the NBA



**tech** universidad  
tecnológica